

## REMARKS

Applicant, by the amendments presented above, has made a concerted effort to present claims which more clearly define over the prior art of record, and thus to place this case in condition for allowance. Currently, claims 1-20 are pending.

5 Under the heading "Specification" on page 2 of the Office Action, the claims were objected to because the Examiner contends that the addition of "substantially" was new matter not supported by the specification as originally filed. Applicant has canceled the term "substantially" in claims 1 and 19. Withdrawal of the objection is requested.

10 Claims 1, 5, 7, 14 and 19 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by United States Patent No. 3,163,707 to Darling. Claims 2, 8, 15 and 16 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Darling. Claim 6 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Darling in view of United States Patent No. 4,874,925 to Dickenson. Claims 17, 18 and 20-24 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Darling in view of United States Patent No. 2,943,644 to Moseley. Claims 1, 3, 4 and 9-13 were rejected under 35 U.S.C. §103 as allegedly  
15 being unpatentable over United States Patent No. 4,838,258 to Dryden in view of United States Patent No. 4,517,404 to Hughes. Reconsideration and withdrawal of these rejections is requested.

20 Independent claims 1 and 19 have been amended to clarify that the very thin walled flexible conduit has a wall thickness less than 50 microns, and that the elongate reinforcing member reinforces the conduit against contraction along the length of the conduit due to fluctuating internal pressure.

Support for the amendment of “said very thin walled conduit having a wall thickness less than 50 microns” is provided in the second paragraph under the heading Summary of the Invention in the specification which reads:

5 Throughout this specification the term very thin walled conduit means a conduit where under the intended prevailing conditions the conduit would be subject to excessive axial compression, e.g. a conduit formed according to a method as described in US patent 3,910,808 using a SYMPATEX film having a thickness less than 50 microns.

10 There are subtleties of the problem described with “very thin walled conduits” which need to be appreciated. The summary of the prior art discussion clearly points out that the problem to which the invention is directed, stems from the fact that very thin walled conduits (i.e. less than 50 micron wall thickness) are “prone to large axial displacement both compressive and tensile. This can lead to substantial internal volume changes under fluctuating breathing pressures ...” (paragraph 3 under the heading Summary of the Prior Art). The conduits of the  
15 cited prior art do not suffer from this problem as the walls are far too thick. As discussed in the prior Amendment, the claimed invention is directed to solving a problem that has not existed in the field before because no prior art conduits have been constructed from such thin materials (i.e. less than 50 microns). Conduits of the prior art have had sufficiently thick walls which when combined with traditional helical reinforcement are able to withstand all but the most extreme  
20 loading situations.

Later in the specification (at the end of the 2nd paragraph under the heading “Detailed Description”), the same problem is described again as:

25 Due to the very thin polymer film forming the walls of the conduit, the resulting breathing circuit limb may have reduced axial stiffness and may be prone to expansion, and contraction along the axis of the conduit, due to axial or torsional forces. In use, axial forces arising from patient breathing may produce expansion and/or contraction along the

length of the limb. In one aspect the present invention provides a breathing circuit limb with improved axial stiffness ...

5 Applicant submits that the amended claims are clearly novel over, and are not rendered obvious by, the prior art because the prior art does not disclose conduits with “very thin walls” being less than 50 microns thick.

10 In addition, to overcome this substantial problem in the prior art, the claims now positively recite that the reinforcing member “reinforces said conduit against contraction along the length of said conduit due to fluctuating internal pressure”. Support for this amendment is found in the previously referenced 2nd paragraph under the heading “Detailed Description”. Therefore, Applicant has amended the claims to recite more specifically the nature of the reinforcement.

15 In amended claims 1 and 19, the limitation “reinforcement” is properly limited to a definition which excludes trivial reinforcing which might be provided by “... any structure running through another structure [which] would provide some at least some degree of axial stiffness to the entire conduit inherently. . .” as suggested by the Examiner (Page 6 of the Office Action). The prior art does not disclose or suggest the type of “reinforcement” specified in the amended claims.

20 In particular, the amendment focuses on the compressive aspect of the reinforcement. As the Examiner has rightly pointed out, any member will inherently provide an element of reinforcement (especially tensile). Applicant submits, however, that it is the compressive reinforcement which lies at the heart of solving the problem as described. It is the tendency of the “very thin walled conduit” to contract, as the thin walls buckle which is the primary focus of the present invention and which distinguishes it from the cited prior art.

With particular regard to Darling, Darling discloses a non-stretch flexible tube with conductors therein. Applicant submits that Darling does not disclose a flexible conduit having “very thin walls”. Therefore, Darling is no need of additional reinforcement of the type to which the presently claimed invention is directed. Thus, Applicant submits that Darling lacks the necessary motivation to adapt the teaching to the present problem.

When examining the prior art that does relate to reinforcing conduit, one of ordinary skill in the art would be taught to utilize more robust **helical** reinforcing. This type of reinforcing is adequate for thicker walled breathing conduits, but when applied to very thin walled conduits, the requisite reinforcement can only be achieved by sacrificing weight and flexibility to unacceptable levels. In contrast, the claimed invention utilizes a novel reinforcing structure that reinforces the conduit against contraction along the length of the conduit due to fluctuating internal pressure, while also providing adequate flexibility. In order to do so, the present invention teaches away from employing only traditional helical reinforcement which is bonded to the tubing along its length.

Darling discloses a conduit with tensile strain limiting cords extending co-axially of the bore. These cords are sheathed in a compliant rubber tube. The objects of Darling make it clear that the conduit is provided with reinforcement against elongation under severe stress, strain and external force. The only significant reinforcement in Darling is provided by the cords inside the tube which limit *elongation* of the tube. Darling is not capable of solving the problem to which the claimed invention is addressed. Therefore, Darling does not reinforces the conduit against contraction along the length of the conduit due to fluctuating internal pressure as specified in amended claims 1 and 19.

With particular regard to the combination of Dryden and Hughes, independent claim 1 specifies “an elongate reinforcing member lying freely within said very thin walled conduit along a non-tortuous path from one end of said conduit to the other end of said conduit, and connected with said first connector and said second connector, such that said elongate reinforcing member  
5 reinforces said conduit against contraction along the length of said conduit due to fluctuating internal pressure”. The Examiner relies upon hose 18 of Hughes to show such an elongate reinforcing member. As disclosed in Col. 2, lines 56-58 of Hughes, hose 18 “is of non-reinforced elastomeric construction”. Therefore, Applicant submits that hose 18 does not disclose or suggest an elongate reinforcing member as specified in amended claim 1. The hose  
10 18 of Hughes is provided for fluid conveyance.

The Examiner suggests that Figure 4 of Dryden shows a member following a slightly tortuous path. However, Figure 4 does not actually show the path of the member between the end connectors at all, but merely the end positions. Figure 3 shows that the path is indeed tortuous, and thereby discloses a configuration that is outside of the claim. By its very shape the  
15 member of Dryden would be incapable of providing any reinforcement as required by the claim, which is fundamental to the claimed invention.

Therefore, Applicant submits that independent claims 1 and 19 are not anticipated by, or rendered obvious by the prior art. Reconsideration and allowance of amended claims 1 and 19 is requested.

20 Claims 2-18 are dependent upon amended claim 1 which Applicant submits is in condition for allowance, and claim 20 is dependent upon amended claim 19 which Applicant

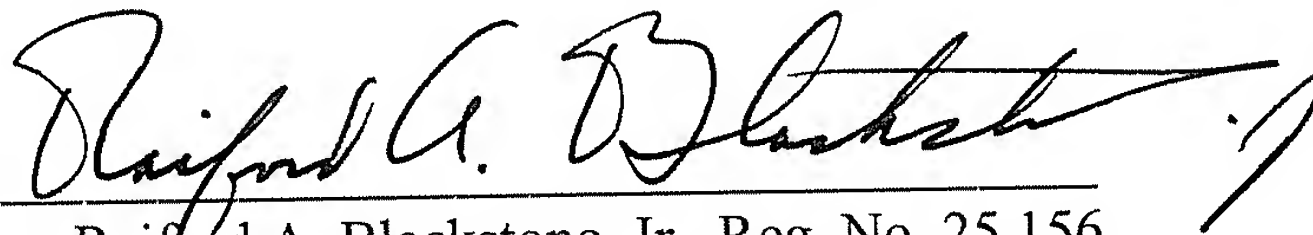
submits is in condition for allowance. Therefore, Applicant submits that these claims are allowable. Reconsideration and allowance of same is requested.

A Request for Continued Examination and a Petition for a Three-Month extension of time to extend the date for response up to and including March 11, 2007 is enclosed.

5 In view of the above Remarks, Applicant respectfully submits that the claims of the application are allowable over the rejections of the Examiner. Should the Examiner have any questions regarding this Amendment, the Examiner is invited to contact one of the undersigned attorneys at (312) 704-1890.

Respectfully submitted,

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